

Appl. No. 09/801,195
Amdt. dated
Reply of Office Action of August 23, 2004

REMARKS/ARGUMENTS

In the Office Action, requirement was made to correct claim 20 to overcome an objection (page 2 of the Office Action). This objection has been overcome by deletion of an allegedly redundant passage from claim 20.

Claims 20-26, 28-33 and 35-38 were rejected under 35 USC 103 as being unpatentable over Emile (US 4,367,467) in view of Koike (US 5,406,399) for reasons set forth in the Action.

Reconsideration of these rejections is requested in view of the amendment and argument herein. In particular, it is noted that amendments to claims 25 and 30 emphasize features of the present invention useful in assembly of the display device, these features being absent from the combined teachings of Emile and Koike. The following additional points are noted for distinguishing the present inventions from the combined teachings of Emile and Koike.

With respect to the objection to claim 20 it is believed that the opposite position of the contacting region to the region of the engagement of the hook elements is not redundant to the feature, that the hook elements are extending toward each other along the surface of the liquid crystal cell. However, to facilitate the prosecution, the additional matter is canceled, as requested by the Examiner. Also it is noted that the deletion of the material from claim 1 serves to broaden the claim. For example the claim

clearly covers a situation wherein a hook element might not face directly its opposing hook element, but is angled thereto.

With respect to the rejection under 35 USC 103, it is believed that the arguments mentioned in the previous response show that the present invention is inventive with respect to Emile. For example, as noted in the previous response, Emile splits the housing into different parts, this necessitating higher accuracy for parts such as a frame that positions the LCD and guides the conductive rubber. Considering only the low number of corresponding features of the disclosure of Koike, the inventiveness of the object of the present invention with respect to Koike is also clear.

Combining both documents, Emile and Koike, a person, skilled in the art is also not led to the present invention. Koike suggests, one to clamp a liquid crystal display between an upper frame and a lower frame, as shown in Figs. 3, 6, 7. Moreover in Fig. 1 an arrangement is shown, wherein a bonding agent of room temperature setting type fixes the liquid crystal panel to a protection frame. As an alternative, a bonding agent of the heat setting type may be employed. As another possibility the liquid crystal panel may be fitted directed in a recessed portion of the protective frame.

First of all, it must be understood, that the protective frame is not a housing. The protective frame according to Koike is referenced with the number 17 and protects the LCD, which is fitted, as shown in Fig. 3, 4, 6 and 7 in a housing consisting of an upper frame 8 and a lower frame 7. Therefore Koike needs at least three parts to hold the LCD, which is very costly and goes along with a high mounting effort.

This solution is even worse than the solution according to Emile and far away from the object of the present invention. Moreover, the solution proposed by Koike does not provide a first hook element and a second hook element engaging over the liquid crystal cell and lying opposite the contacting region, being arranged outside the display region of the liquid crystal cell. To overcome the problems connected with positioning and holding a liquid crystal cell in a housing, the proposal of Koike chooses a totally different way and therefore this arrangement needs a protective frame, since otherwise the arrangement is not able to cope with mechanical impact.

The very costly arrangement in Koike of the protective frame leads to another disadvantage, which arises when contacting the liquid crystal cell. Contacting the liquid crystal cell is a mounting step, which needs a very high degree of accuracy, since the contact terminals of the LCD are positioned very close together. The providing of the protective frame is in first instance connected with the disadvantage that space needed to contact the LCD is eliminated. The second disadvantage is caused by the bonding agent, which might insulate some of the contact terminals and therefore lead to faults. But the worst disadvantage is a result of the mounting of the protective frame to the LCD itself and the mounting of the protective frame to the housing in a second step. If the electrical contact to the LCD is established using a contacting element, the chain of tolerances positioning the LCD with the protective frame and the housing and eventually further elements leads to the necessity to manufacture and mount the protective frame and the housing with a very high accuracy. This leads to excessive costs and is not a realistic solution for mass production. All these disadvantages are avoided by the present invention.

In the event there are further issues remaining the Examiner is respectfully requested to telephone attorney to reach agreement to expedite issuance of this application.

Since the present claims set forth the present invention patentably and distinctly, and are not taught by the cited art either taken alone or in combination, this amendment is believed to place this case in condition for allowance and the Examiner is respectfully requested to reconsider the matter, enter this amendment, and to allow all of the claims in this case.

Respectfully submitted,
Heinz-Günther Wilhelm

by: MARTIN A. FARBER
Attorney for Applicant
Registered Representative
Registration No. 22,345

CERTIFICATE OF MAILING UNDER 37 CFR SECTION 1.8(a)

I hereby certify that the accompanying Amendment is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patent, P.O. Box 1450, Alexandria, VA 22313-1450, on October 20, 2004.

Dated: October 20, 2004

Martin A. Farber

866 United Nations Plaza
New York, NY 10017
(212) 758-2878